GOVERNMENT OF INDIA
DRINKING WATER AND SANITATION
LOK SABHA

STARRED QUESTION NO:405
ANSWERED ON:30.03.2017
Technologies for Water Conservation
Girri Shri Maheish

Will the Minister of DRINKING WATER AND SANITATION be pleased to state:

(a) whether the Government has conducted any study to document multiple technologies which are currently being used for water conservation in the rural areas and if so, the details thereof;

(b) whether the Government has conducted any research to improve drinking water quality especially in rural areas and if so, the details thereof;

(c) the technological advancements made to reduce water scarcity during the last two years; and

(d) the details of the major developments which took place in rural sanitation technology during the last two years?

Answer

MINISTER OF DRINKING WATER AND SANITATION
(SHRI NARENDRA SINGH TOMAR)

(a) to (d) A Statement is laid on the Table of the House.

Statement referred to in the reply to Lok Sabha Starred Question No. 405 due for reply on 30.03.2017

(a) This Ministry has not conducted any study in recent times to document multiple technologies which are currently being used for water conservation in the rural areas. However, as reported by Central Ground Water Board (CGWB), the board has prepared a conceptual document entitled "Master Plan for Artificial Recharge to Ground Water in India", 2013 involving ground water scientists and experts. The Master Plan envisages construction of about 23 lakhs Artificial Recharge and Rain Water harvesting structures in rural areas and 88 lakhs Rain Water harvesting structures in urban areas. The various structures proposed in rural areas include: Percolation Tanks, Check Dams, Nala Bunds, Gully Plugs, Gabion Structures etc. and sub-surface techniques of recharge shaft, well recharge etc. have been recommended.

(b) Yes Madam. The Ministry of Drinking Water and Sanitation, Government of India has got conducted 35 research and development projects for improvement of drinking water quality in the rural areas of the country. The improvement of drinking water quality include reduction / removal of fluoride, arsenic, nitrate, iron, chromium etc. For conducting the research, the Ministry awarded and funded the work to reputed institutions like Indian Institute of Technology, National Environmental Engineering Research Institute, National Chemical Laboratory, National Metallurgical Laboratory, Indian Institute of Science, etc.

(c) Under National Rural Drinking Water Programme (NRDWP), the following technologies are being used in drinking water schemes to reduce drinking water scarcity:-

i. Flood recharging method (only for regional drinking water systems)
ii. Gully plugs
iii. Recharge Pit
iv. Contour trench/bund
v. Semi-circular trenches on slopes

vi. Check dam/Nala bund
vii. Percolation pond/tank
viii. Sub-surface dyke
ix. Injection well
x. Injection spring
xi. Induced spring
xii. Recharge shaft
xiii. Recharge well/Dug well with radial recharging systems
xiv. Point source recharging systems(defunct borewells and abandoned dugwells)
xv. Recharging through sand dunes-coastal desert
xvi. Levees − for retaining the flash run-off

xvii. Infiltration well with collector well
xviii. Infiltration gallery
xix. Ooranis or scientifically developed village ponds with in-situ filtration and collection system
xx. Roof water harvesting for community structures like, anganwadis, GP office, etc.
(d) An expert committee under chairmanship of Dr. R.A. Mashelkar has been constituted to suggest new innovative technologies in Sanitation. The committee have accredited 10 innovative technologies in Sanitation as under.

S.N. Accredited Innovative Technologies
1. Water less urinals
2. Fluidized Media Reactor for Liquid Waste Management
3. Textile Reinforced Concrete Modular Toilet
4. Plastic - Tar Road
5. Pre Assimilated Technology
6. Soil Bio Technology
7. Phytorid Technology
8. Anaerobic Bio-digestor Toilet
9. Aerobic Bio-digestor Toilet
10. Bioclean BD anaerobic facultative microbial cultures

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